Mapping to identify areas with non-conventional energy sources

2029. SHRI RAMDAS AGARWAL: Will the Minister of NON-CONVENTIONAL ENERGY SOURCES be pleased to state:

(a) whether Government have conducted mapping of different parts/ regions in country, where there is a huge potential for non-conventional energy sources;

(b) if so, details of States/regions so identified alongwith the estimated power generation capacity;

(c) whether Government have provided capital subsidy to unemployed youth for setting up non-conventional power plants;

(d) if so, the details thereof alongwith the total amount of subsidy disbursed as on March 31, 2006; and

(e) the total number of non-conventional power plants/units set up in country, State-wise, as on March 31, 2006, alongwith the estimated power generation capacity of these plants?

THE MINISTER OF STATE OF THE MINISTRY OF NON-CONVENTIONAL ENERGY SOURCES (SHRI VILAS MUTTEMWAR): (a) and (b) Yes, Sir. Different studies/estimates indicate a potential of around 84,000 MW power generation from renewable sources such as wind, small hydro and biomass exists in the country. This potential is spread over all States/UTs as detailed in the enclosed Statement (*See* below).

(c) and (d) Non-conventional energy programmes in the States are implemented through State Nodal Agencies. However, State Nodal Agencies may involve unemployed youth for implementation of various programmes/schemes depending upon the nature and need of the project.

(e) Around 8088 MW grid-interactive renewable power generation capacity has been set up in the country as on 31.03.2006, state-wise details of which are given in the enclosed Statement.

Statement

State-wise details of estimated potential and achievements under grid-interactive renewable power as on 31-03-2006 (1)

(in MW)

Sl. No.	States/UTs	Wind Power		Small Hydro Power		Biomass Power/ Cogen.		Waste to Energy	
		Potential(2)	Ach.	Potential	Ach.	Potential(3)	Ach.	Potential	Ach.
1	Andhra Pradesh	8275	121.00	255	178.81	200	279.25	123	22.50
2	Arunachal Pradesh			1059	44.30				
3	Assam			149	2.11	5		8	
4	Bihar			194	50.40	200		62	
5	Chhattisgarh			180	11.00		27.50	20	
6	Goa			3	0.05	5			
7	Gujarat	9675	338.10	157	7.00	200	0.50	112	
8	Haryana			30	62.70		6.00	23	
9	Himachal Pradesh			1625	132.08			1	
10	Jammu & Kashmir			1207	109.74			10	
11	Jharkhand			170	4.05				
12	Karnataka	6620	584.60	653	329.63	300	224.48	151	1.00
13	Kerala	875	2.00	467	84.62	10		37	
14	Madhya Pradesh	5500	40.30	336	41.16	25	1.00	92	2.70
15	Maharashtra	3650	989.60	599	207.08	1000	36.00	287	1.00
16	Manipur			106	5.45			2	
17	Meghalaya			182	30.71			2	

1	2	3	4	5	6	7	8	9	10
18	Mizoram			190	14.76			2	
19	Nagaland			181	20.67				
20	Orissa	1700		157	7.30	25		22	
21	Punjab			65	122.55	150	28.00	45	1.00
22	Rajasthan	5400	339.60	27	23.85	10	15.30	62	
23	Sikkim			203	38.60				
24	Tamil Nadu	3050	2892.50	339	77.70	350	174.00	151	1.75
25	Tripura			10	16.01			2	
26	Uttar Pradesh			267	25.10	1000	121.50	176	5.00
27	Uttaranchal			1478	75.45			5	
28	West Bengal	450	1.10	183	98.30	10		147	
29	Andaman & Nicobar			6	5.25				
30	Chandigarh							6	
31	Dadar & Nagar Haveli								
32	Daman & Diu								
33	Delhi							131	
34	Lakshadweep								
35.	Pondicherry					10		3	
	Others*		1.60	4523		17500		1020	
	Total	45195	5310.40	15000	1826.43	21000	913.53	2700	34.95

MW = Megawatt; *State-wise break-up not finalised; (1), (2), (3) : refer explanatory notes on page 2.

Explanatory Notes:—

(1) This excludes potential for Solar Power which is dependent on future developments making solar technology cost-competitive for grid power applications.

(2) Taking into account sites with wind densities of 250 W/m^2 or higher with 3% of assessed area available for wind farms requiring 12 ha/MW. The technically feasible potential for grid-interactive power could be lower if sites with wind densities of 300 W/m^2 or higher are considered as suitable in keeping with international practice.

(3) This excludes a potential of 45,000 MW from around 20mha of wastelands yielding 10MT/ha/annum of woody biomass giving 4000 k-cal/kg with system efficiency of 30% and 75% PLF. In order to realize this estimated potential a major inter-Ministerial initiative involving, among others, Agriculture, Rural Development, Panchayati Raj, Environment & Forests would be required.

Includes potential of 16000 MW based on surplus agro-residues. In practice biomass power generation units prefer to use forest-residues for techno-economic reasons.

Projects under Village Energy Security Programme for Orissa

2030. MS. PRAMILA BOHIDAR:
SHRI B.J. PANDA:

Will the Minister of NON-CONVENTIONAL ENERGY SOURCES be pleased to state:

(a) whether Government have sanctioned additional projects to Orissa under Village Energy Security Programme;

(b) the total number of such projects that have been sanctioned in Orissa;

(c) how many out of these have been distributed to tribal belts; and

(d) the action plan of Government to light up all the villages in the State which are not accessible through grid power?

THE MINISTER OF STATE OF THE MINISTRY OF NON-CONVENTIONAL ENERGY SOURCES (SHRI VILAS MUTTEMWAR): (a) and (b) A total of ten test projects on village energy security have been sanctioned in Orissa.